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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/569,712

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EXAMINER

JACOBS, TODD D

ART UNIT

PAPER NUMBER

3746

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12/29/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/569,712	Applicant(s) OYAMA ET AL.	
	Examiner TODD D. JACOBS	Art Unit 3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 1 lines 9-11 and claim 6 lines 10-12 recite that “**the ball bearing** and the commutator are arranged such that at least part of **the ball bearing** and a part of the commutator are inserted into the recessed portions.” However, the ball bearing as seen in fig. 2 (55 and surrounding) is not inside of the recessed portion of the armature as claimed.

4. For the purposes of this examination, the limitation of the ball bearing in the recessed section is removed and the above quoted section is interpreted as: “the commutator is arranged such that at least part of the commutator is inserted into the recessed portions”.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims are 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alaze et al (US PG-Pub 2002/0090306) in view of Prinz (US Patent 1,162,512) in further view of Reinartz et al (6,617,745).

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7. In re claim 1, as best understood, Alaze et al, with reference to figure 1 below, teaches a motor (12) having an eccentric portion (32) including a rotational shaft (18) which has an axis and supports an armature (20) and a commutator (22) thereon, and an eccentric portion (32) which is eccentrically configured with respect to the axis on the rotational shaft (18), the eccentric portion (32) constituting an output portion for driving an external equipment, wherein the eccentric portion (32) includes a shaft portion (SP) of the rotational shaft (18) which has an axis equal to the axis.

8. However, Alaze et al does not teach the use of an eccentric ball bearing which is joined to the rotational shaft and has another axis which is eccentric respect to the axis of the rotational shaft and the shaft portion.

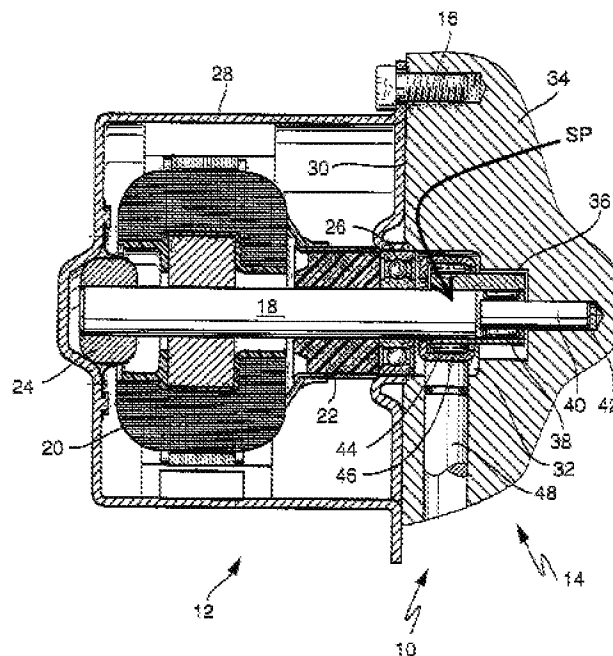


Figure 1

9. Nevertheless, Prinz, with reference to figure 2 below, teaches the use of an eccentric ball bearing (EBB) which is joined to the rotational shaft (14) and has another axis which is

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eccentric respect to the axis of the rotational shaft (14) and the shaft portion (SP). Using a ball bearing instead of a roller or needle bearing, as the applicant discloses in paragraph 4, will allow for a lower cost, smaller and lighter motor.

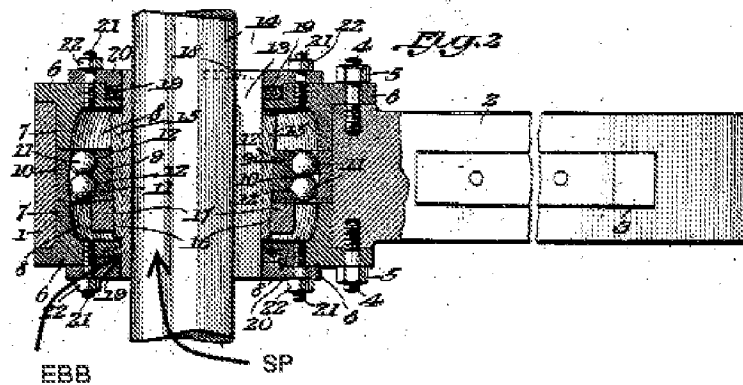
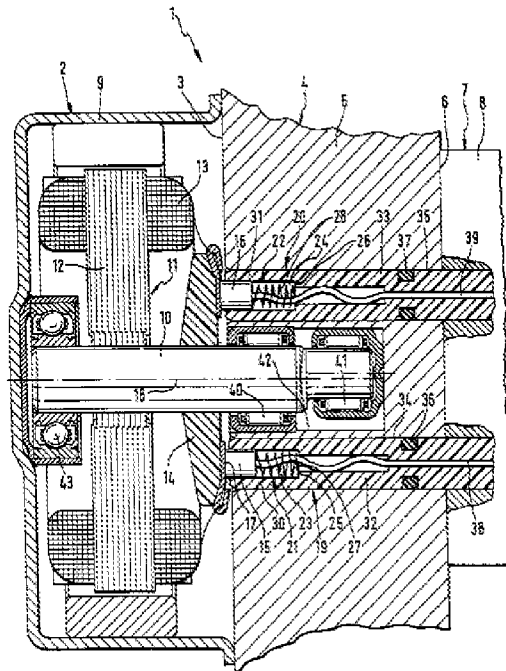


Figure 2

10. Therefore, it would have been obvious to one having ordinary skill in the art to modify Alaze et al in view of Prinz by replacing the roller bearing with ball bearing in order to create a motor that is less expensive, smaller and lighter.

11. However, while Alaze teaches the armature is formed such that a center portion thereof is recessed (see opening of armature in figure 1), Alaze fails to disclose that the commutator is arranged such that at least part of the commutator is inserted into the recessed portion.

12. Nevertheless, with reference to figure 3 below, Reinartz discloses a recessed armature wherein at least part of the commutator is inserted into the recessed portion. This allows more space to be saved.

**Figure 3**

13. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify Alaze in view of Reinartz by moving at least part of the commutator into the recessed section of the armature as taught by Reinartz in order to save more space in the pump of Alaze.

14. In re claim 2, with reference to figure 2 above, Prinz discloses an eccentric ball bearing (EBB) constituted of an the inner race (9) which is eccentric with respect to the axis of the rotational shaft (14) and the shaft portion (SP), an outer race (10) which is positioned outside the inner race (9) and has an inner-peripheral-side circle and an outer-peripheral-side circle, the centers of which are equal, and balls (11) which are supported between the outer race (10) and the inner race (9).

15. In re claims 3 and 10, with reference to figure 2, Prinz discloses an eccentric ball bearing (EBB) jointed to the rotational shaft (14) in a close fit state.

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16. In re claims 4 and 11, with reference to figure 1 above, Alaze et al teaches an armature (20), commutator (22) and eccentric portion (32) arranged on the axis in the order.

17. In re claims 5 and 12, Alaze et al modified by Prinz has been discussed above but fails to disclose a motor with an output of 150 Watts or less.

18. Nevertheless, the motor taught by Alaze et al will inherently provide an unspecified output (Watts).

19. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to restrict the output of the motor to 150 Watts or less, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

20. In re claim 6, with reference to figure 1 shown above, Alaze et al discloses a pump device (12) including a rotational shaft (18) which has an axis and supports an armature (20) and a commutator (22) thereon, an eccentric portion (32) which is eccentrically configured with respect to the axis on the rotational shaft (18), and a plunger pump (48) which is brought into contact with the eccentric portion (32) and is driven by an eccentric motion of the eccentric portion (32), wherein the eccentric portion (32) includes a shaft portion (SP) of the rotational shaft (18) which has an axis equal to the axis.

21. However, Alaze et al does not teach an eccentric ball bearing which is joined to the shaft portion of the rotational shaft and has another axis which is eccentric with respect to the axis of the rotational shaft and the shaft portion.

22. Nevertheless, Prinz, with reference to figure 2 above, teaches the use of an eccentric ball bearing (EBB) which is joined to the rotational shaft (14) and has another axis which is eccentric respect to the axis of the rotational shaft (14) and the shaft portion (SP). Using a ball

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bearing instead of a roller or needle bearing, as the applicant discloses in paragraph 4, will allow for a lower cost, smaller and lighter motor.

23. Therefore, it would have been obvious to one having ordinary skill in the art to modify Alaze et al in view of Prinz by replacing the roller bearing with ball bearing in order to create a pump device that is less expensive, smaller and lighter.

24. However, while Alaze teaches the armature is formed such that a center portion thereof is recessed (see opening of armature in figure 1), Alaze fails to disclose that the commutator is arranged such that at least part of the commutator is inserted into the recessed portion.

25. Nevertheless, with reference to figure 3 above, Reinartz discloses a recessed armature (13) wherein at least part of the commutator (14) is inserted into the recessed portion. This allows more space to be saved.

26. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify Alaze in view of Reinartz by moving at least part of the commutator into the recessed section of the armature as taught by Reinartz.

27. In re claim 7, with reference to figure 2 above, Prinz discloses an eccentric ball bearing (EBB) constituted of an the inner race (9) which is eccentric with respect to the axis of the rotational shaft (14) and the shaft portion (SP), an outer race (10) which is positioned outside the inner race (9) and has an inner-peripheral-side circle and an outer-peripheral-side circle, the centers of which are equal, and balls (11) which are supported between the outer race (10) and the inner race (9).

28. In re claims 8 and 9, with reference to figure 2, Prinz discloses an eccentric ball bearing (EBB) jointed to the rotational shaft (14) in a close fit state.

Response to Arguments

29. Applicant's arguments filed have been fully considered but they are not persuasive.

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- Applicant argues that the eccentric ball bearing of Alaze does not belong to the motor. However, since the eccentric ball bearing rests on the drive shaft of the motor, it is believed to be part of the motor.
- Applicant further argues that Prinz does not teach the use of an eccentric ball bearing. However, Prinz with reference to figure 2 above *does* teach an eccentric ball bearing (EBB). Note that EBB does not directly point toward any one element, but the eccentric ball bearing device as a whole.

Response to Amendment

30. Applicant's amendments with respect to claims 1 and 6 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

31. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to TODD D. JACOBS whose telephone number is 571-270-5708. The examiner can normally be reached on Monday - Friday, 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on 571-272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/TODD D. JACOBS/
Examiner, Art Unit 3746

/Devon C Kramer/

Supervisory Patent Examiner, Art Unit 3746